WAIStation

A User Interface for Wide Area Information Servers

User Guide, Prototype Version

TMC-203

This document briefly describes the initial prototype of WAIStation™, a user interface for Macintosh® developed by Thinking Machines Corporation. WAIStation enables users to retrieve information from the DowQuest™ document retrieval system at Dow Jones News/Retrieval,® the Connection Machine® Document Retrieval System, your local Macintosh, and any other database server that supports the WAIS protocol.

The interface communicates with the database server using an ANSI standard protocol for database retrieval applications, called Z39.50 (see references). WAIStation communicates through either the serial port (to a modem or terminal line) or via AppleTalk® or EtherNet® to a UNIX™ system running the Connection Machine Document Retrieval System.

The goal of the Wide Area Information Servers project is create an open architecture of information servers and clients by deriving and standardizing a computer-to-computer protocol that will enable users to find and question servers.

For more information on the WAIS project see the references section at the end of this document.

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Thinking Machines Corporation
245 First Street
Cambridge, Massachusetts 02142-1214
(617) 876-1111

WELCOME TO WAIStation

Have you ever been frustrated by a search-and-retrieval system that couldn't seem to understand what you wanted?

Have you ever looked through a dozen retrieved articles to find only one that met your intent?

Have you ever wanted to wave that one good article at the system, and say "Look! This is what I want! Find me more articles like this one!"

Well, now you can do exactly that.

WAIStation was built around two notions: first, that the user of a search-and-retrieval system should be able to provide feedback to assist or retarget the search; and, second, that the best way to search for articles (or any other documents) is to search from a good example, not just from one or two keywords.

So, the model for a WAIStation search is:

* Start with a few key words or phrases (as usual).
* Examine the articles WAIStation retrieves.
* Tell WAIStation which articles, or which sections of articles, you find most useful (i.e. closest to the subject you're looking up). Ask it to search again, using those selections as models.
* Repeat the process until you've found what you want.

SHARPENING AND WIDENING SEARCHES

Providing "relevance feedback" to WAIStation, as explained above, lets you zero in on precisely the information you're looking for. But it also lets you widen a search, or change it completely. While you're hunting for information on Subject A, if an interesting article on Subject B turns up you can select that article as the model for the next search. What's more, you can "branch off" onto a new search without losing track of your original search. In fact, you can continue both searches, and even start others; the range and movement of your searches are up to you.

SEARCHING IN MANY SOURCES

WAIStation gives you access to sources of information ranging from files stored on your own computer's disks to electronic libraries across the country. Moreover, it lets you search through any combination of these sources in a single, integrated search. You choose which sources are to be used for which searches; you can change your mind at any stage during the search.

AUTOMATICALLY RE-SEARCHING QUESTIONS

Since new information arrives all the time, you frequently want to run searches at intervals, to find out "what's new" in some particular area. To facilitate this, WAIStation lets you store the data from a search as a Question. You can then instruct WAIStation to run questions for you at selected intervals. For example, WAIStation can run questions for you each morning at 3 am, and have the results waiting for you when you come into work. (Of course, you can re-run your questions interactively, or change them as you like, at any time.)

GO AHEAD – EXPLORE!

This introduction has only suggested what WAIStation can do for you. The rest of this Quick Reference Guide will explain how to do each of the items mentioned above. But to get fullest use out of WAIStation, you'll have to try it out for yourself. Explore – experiment – see what works best for you. And please, since this is still an experimental system, let us know how you like it. Fill out and mail the questionaire at the end of this booklet. Or,

Send comments, questions, complaints, or praise to:

Brewster Kahle
Thinking Machines Corporation
245 First Street
Cambridge, MA 02142
(617) 234-1000
Email: wais@think.com
AppleLink: wais@think.com@dasnet#

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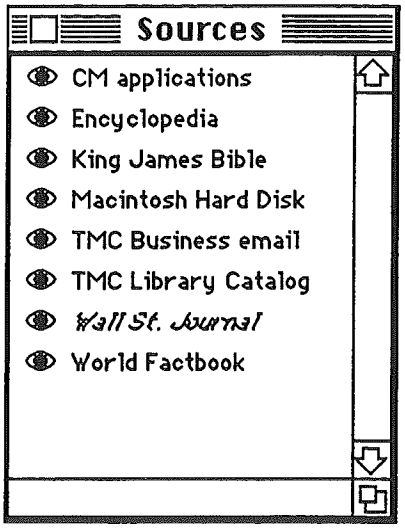
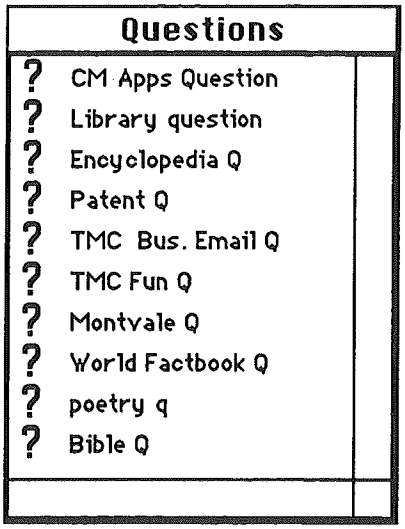
GETTING STARTED

Double-click on the WAIStation icon:

‰The SOURCES and QUESTIONS windows will appear.



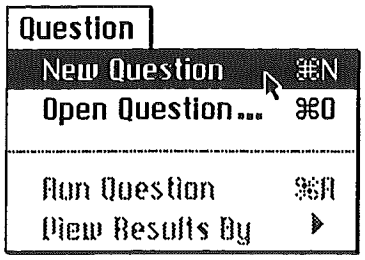


Sources are generally available to everyone at a given site.

Questions, on the other hand, generally belong to individuals. If this is the first time you have used WAIStation, your QUESTIONS window will probably be empty. When you save a question, its name and icon appear in your window.

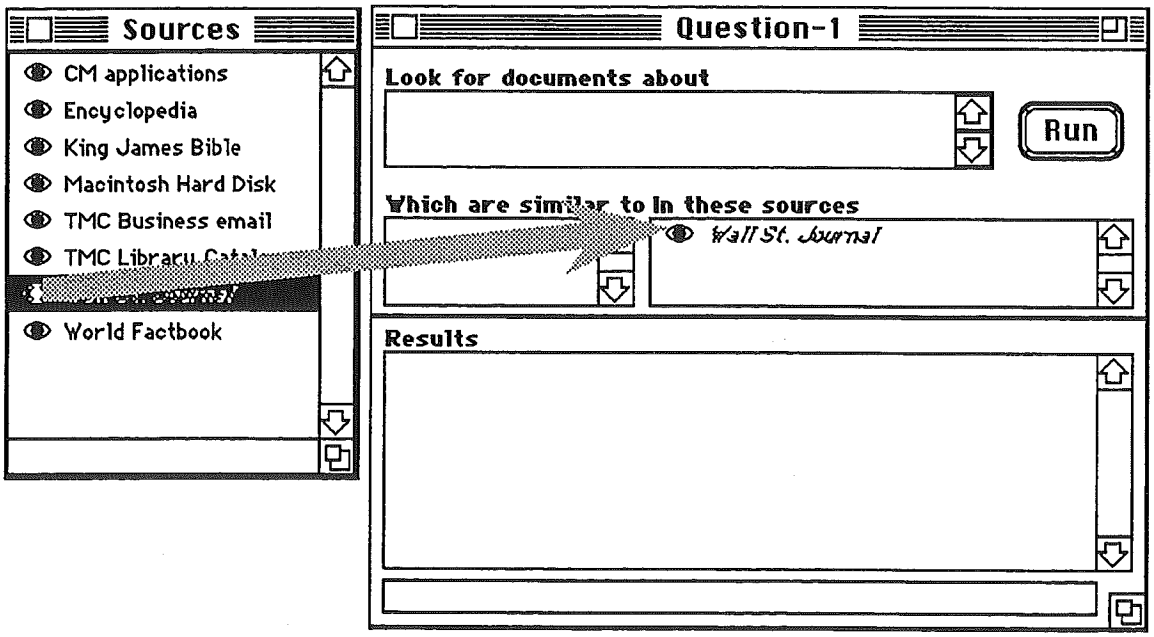
CREATING A NEW QUESTION

1. From the QUESTION menu, select NEW QUESTION.



‰A new QUESTION window opens.

2. Choose a source that you want your Question to search. Drag it from the SOURCES window into the "From These Sources" field in the QUESTION window.



‰The source name will appear in the "sources" field.

Do this for as many sources as you wish.

3. Type words or phrases in the "Look for documents about" field, describing the subjects about which you want information. WAIStation searches for these words to find useful documents.

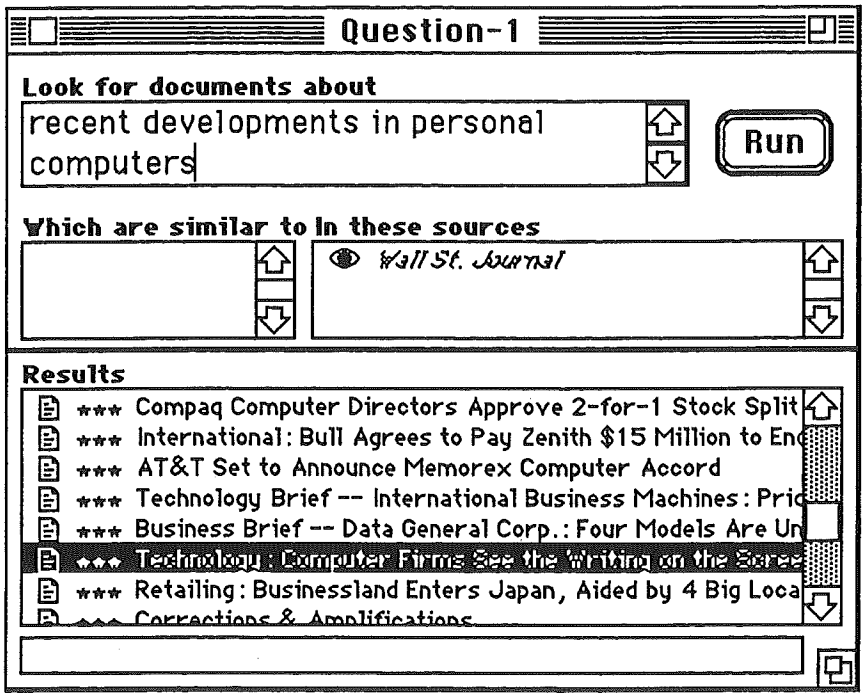
4. Click on RUN, to run the question. (See GETTING RESULTS, on page 4)

GETTING RESULTS

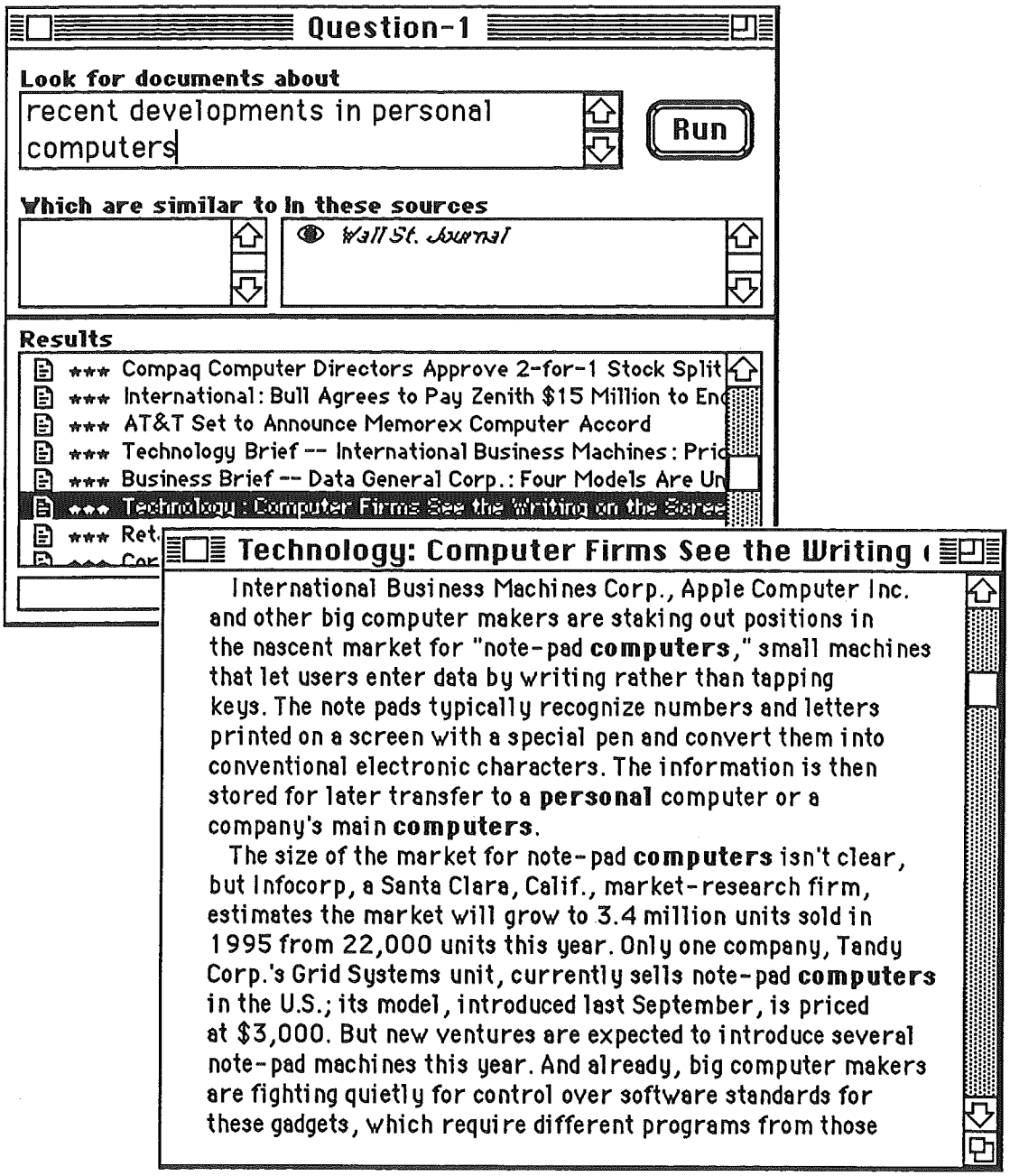
1. Click on RUN (or, hit RETURN).

   ‰ *The world cursor will turn while WAIStation searches for documents that match your request. The "Results" field then displays the titles of the most useful documents found. Documents are ranked from 0 to 3 stars, depending on how well they match the question: the best matches are at the top of the list.*

   Click on the scroll bar to see more documents.



2. Double-click on any document in the list to display it.



A new window opens, displaying the document. If the document is too large to fit in the window, the section that shows the best match to your question is displayed.

You can display as many of the documents as you like. You can also save and print documents, using commands in the FILE menu. The TEXT menu contains commands that control the format in which documents are displayed.

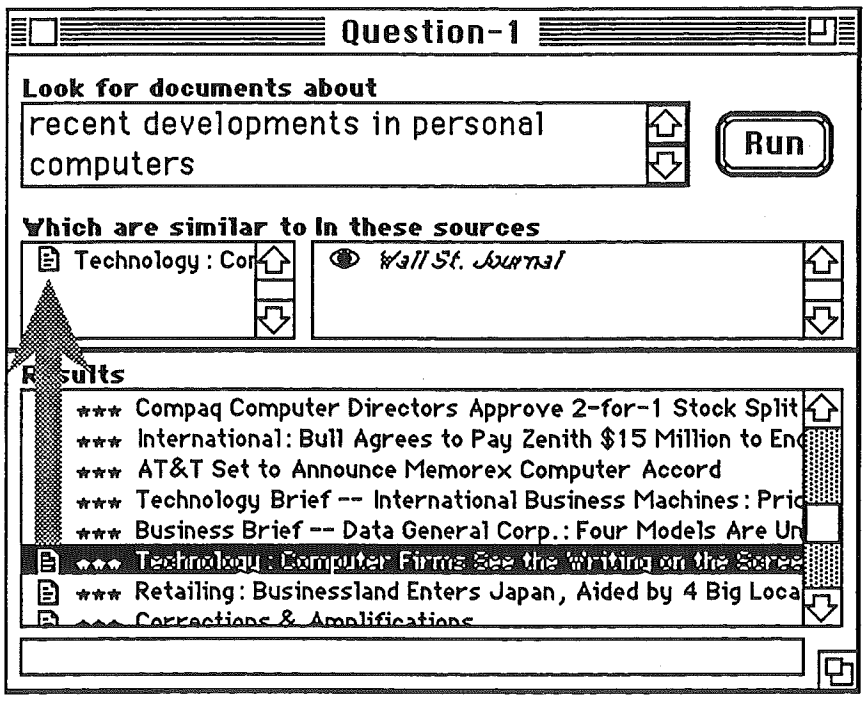
3. Searching from keywords alone is rarely sufficient. At this point, therefore, you probably want to to select some documents (or some sections of some documents) to guide the next step of your search. The next few pages explain how to do this and suggest some possible search strategies.

   On the other hand, you may have found what you wanted; or, you may not have time at the moment to pursue the search. In these cases, you can either discard your question or save it to re-use at a later time. For information on how to do this, see page 10.

SEARCH STRATEGIES – IMPROVING QUESTIONS

You can use the information from one set of results to modify your original question or to create further questions. Improving your original question often leads to improved results. So, if your first search didn't provide what you want, try one of the following techniques.

1. Probably the best way to improve a question is to drag one or more particularly interesting documents from the Results list into the "Similar To" field. This allows WAIStation to get a fuller sense of what you're looking for, and thus a better chance of finding the information you need.

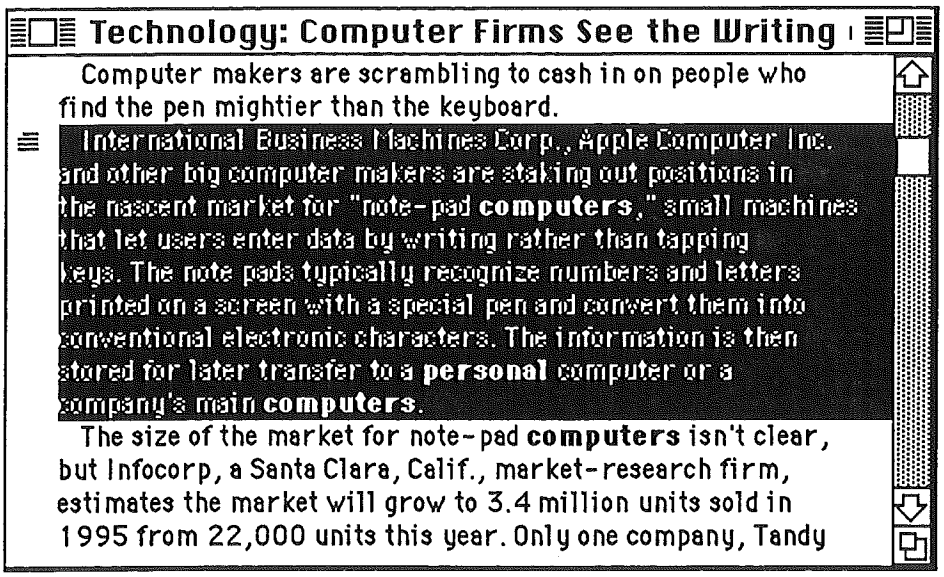


‰ *When you run the question again the Results list will be updated with the new results, which will include documents similar to the one you selected (if such documents exist in the database).*

SELECTING PART OF A DOCUMENT

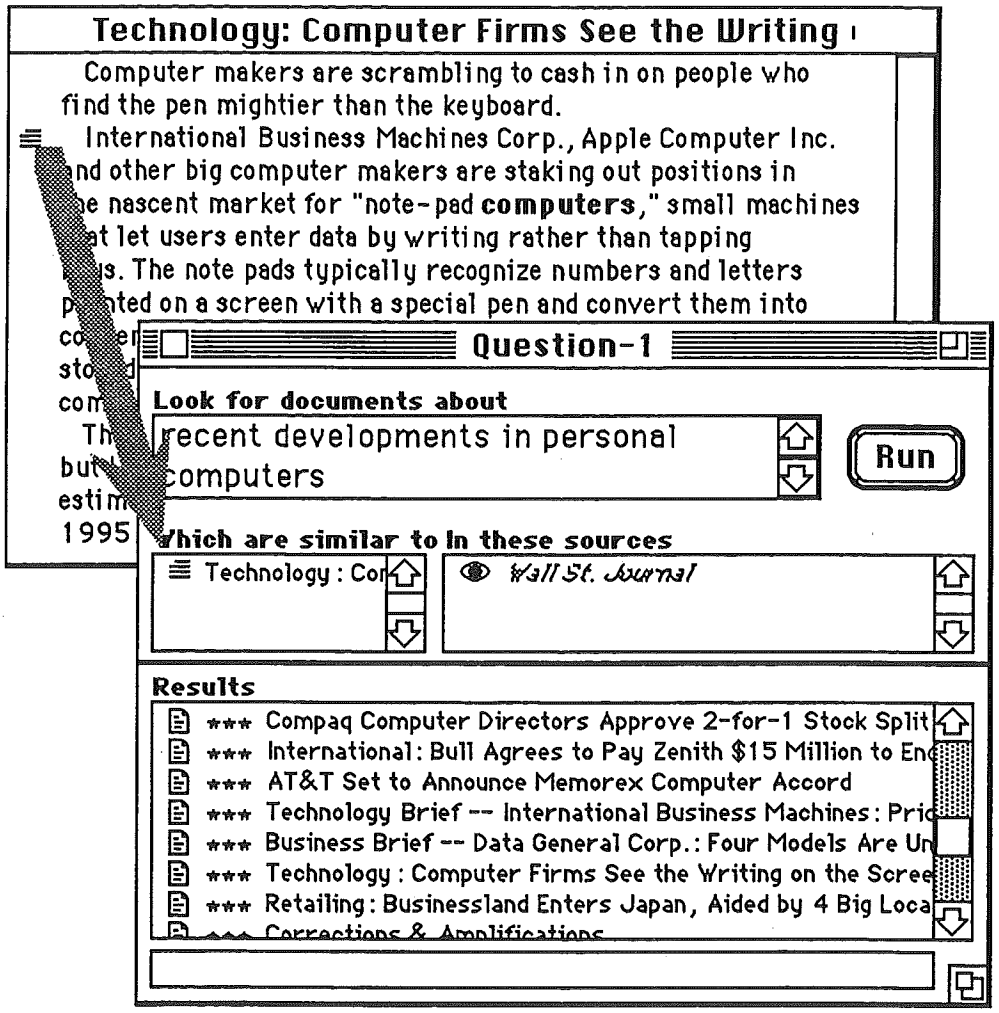
2. Alternatively, if one particular section within a document seems more useful than the rest, you can ask WAIStation to search for documents that resemble that section. To do that,

   * Drag the cursor over a section of the document to select the text.



‰An icon will appear in the left margin.

* Drag the new icon into the "Similar To" field.



Run the query again.

‰ The results will be updated with documents similar to the text you selected.

OTHER METHODS

3. You can add or remove searchwords. This is often helpful if WAIStation didn't interpret your initial words the way you expected it to.

   Add searchwords by typing them in; remove them by backspacing over them, or by selecting them with the mouse and then pressing Delete.

4. You can add or remove sources.

   Add sources by dragging them into the source field; remove them by dragging them out of the source field.

   After modifying your QUESTION, click again on RUN.

   %∘A new list of documents will be displayed. (If the new list is identical to the old list, then you may want to try using different searchwords. Otherwise, chances are that you need to try a different approach, or that the database really doesn't contain any more documents that are relevant to your question.)

SEARCH STRATEGIES – FOLLOWING TANGENTS

The techniques listed on the previous page explained how to improve a search for information on your original topic. Other search strategies involve changing topics, perhaps to follow up some new line of questioning that grew out of your original search.

* You can change the topic completely by changing searchwords.

* You can follow a new line of research that suggests itself, by dragging the relevant result(s) – whole documents or sections – into the Similar To field. You may want to change your searchwords to fit the new topic, as well.

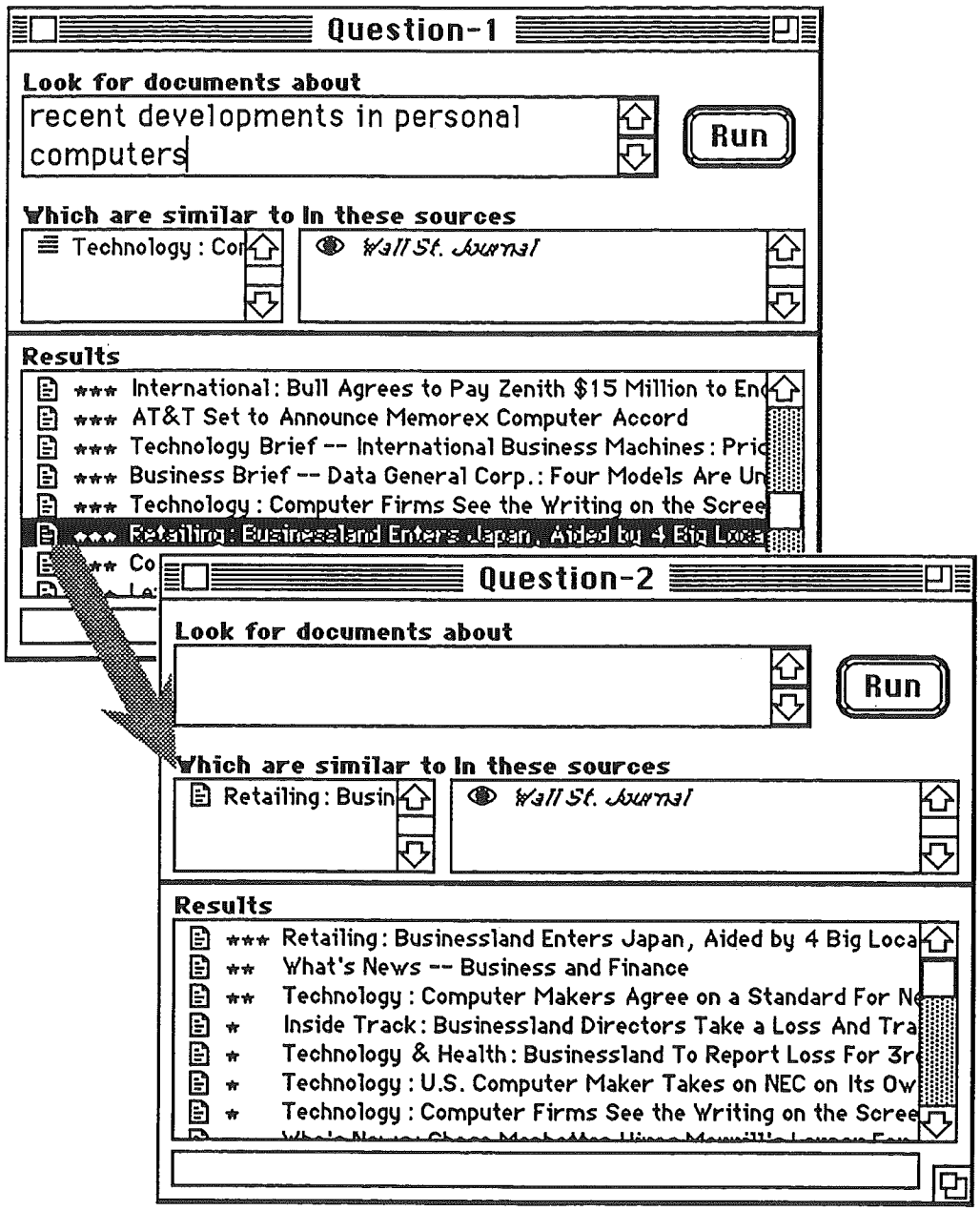
Either of these strategies can be accomplished either by altering your original question, or by creating new questions that preserve the context of the older questions. "Chaining questions" in this manner allows you to follow interesting new directions in a search, without losing any of your old data.

CHAINING QUESTIONS

1. While one question window is open, select NEW QUESTION from the QUESTION menu.

   ‰ *The new Question window will contain the same sources as the existing Question window has. You can alter this list of sources, or use it as is.*

2. Drag documents or sections of documents from the existing Results into the Similar To field in the new Question window. Or, type searchwords into the new window. Or do both.



3. RUN the new question.

   You can continue to chain questions at will. You can save any of these questions whenever you like.

TO CLOSE AND/OR SAVE A QUESTION

1. Click on the box in its upper left corner.

   ‰ *If the question has not been saved previously, or if you have made changes to the question, WAIStation asks you if you want to save the changes you have made.*

2. Click on YES to save the new version of the question.

   ‰ *If the question has not been saved before, it will appear in the QUESTIONS window.*

   Click on NO to discard the modifications (or, if this is a new question, to discard the entire question.)

TO SAVE A QUESTION WITHOUT CLOSING IT

Select SAVE or SAVE AS from the FILE menu.

TO RE-OPEN A QUESTION

Double-click on its icon in the QUESTIONS window. (Or, open the question from the QUESTION menu.)

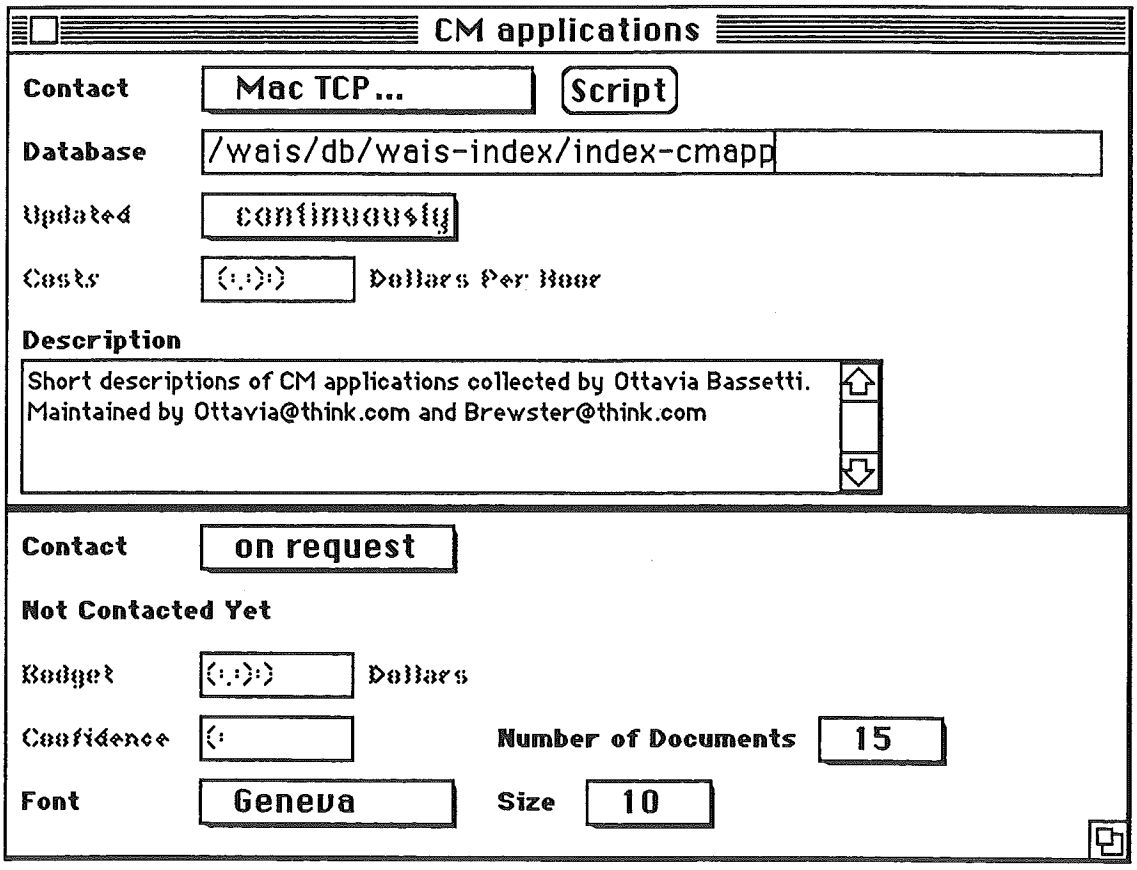
KEEPING UP-TO-DATE ON SOURCES

Your System Administrator will have arranged to have some or all of your site's sources updated at regular intervals. Needless to say, these intervals may not be the same for all sources. (A daily newspaper and a weekly magazine will probably be updated at different intervals.)

In order to decide when you want your Questions run, therefore, you must ask two questions: "How often am I interested in checking this question?" and "How often (and when) will its sources be updated?" If your sources are updated daily, it makes no sense to re-run your questions every hour; if you only want to check for new data once a week, then running the question weekly is the best strategy.

To find out when a source is updated, and to tell WAIStation when to search that source for you, use the SOURCE window for each source your questions search.

1. Double-click on a Sources icon (or choose OPEN SOURCE from the Source menu).



‰ *The SOURCE window for the selected source appears. You will notice, in the upper half of the window, information that tells you when the database for this source is updated.*

2. You may select the number of document headlines you wish to have displayed with the "Number of Documents" pop-up menu.

3. You can also select the default font and size of the text for documents that are displayed from this source, using the Font and Size pop-up menus.

4. Click on the "Contact" field in the lower half of the window. Choose how often you want your questions to search this source.

   ‰ *The selected interval will appear in the Contact field, followed by fields that request further information.*

   Click on those fields, and enter the information. See your system administrator for additional assistance.

Note: Try to select a time for your automatic searches that won't conflict with the times everyone else chooses. A couple of good guidelines are: Don't search a source as soon as it's updated; and, if you're specifying an exact time, use an odd number of minutes: 3:52, for example, rather than 3:30 or 4:00.

Note also: every question of yours that searches this source gets updated at the time you choose. Questions that search multiple sources get updated every time one of their sources is searched.

REFERENCES

Wide Area Information Concepts, Brewster Kahle. Thinking Machines Technical Memo DR-89-1. Available from Thinking Machines Corporation or Brewster Kahle (Internet: brewster@think.com; AppleLink: BREWSTER).

WAIS Interface Protocol Prototype Functional Specification, Franklin Davis et al. Thinking Machines. Available from Franklin Davis (Internet: fad@think.com; AppleLink: FAD) or Brewster Kahle (brewster@think.com, BREWSTER).

Z39.50-1988: Information Retrieval Service Definition and Protocol Specification for Library Applications. National Information Standards Organization (Z39), P.O. Box 1056, Bethesda, MD 20817. (301) 975-2814. Available from Document Center, Belmont, CA. Telephone 415-591-7600.

DowQuest promotional literature available from Dow Jones & Co. Inc., 200 Liberty Street, New York, NY 10281.

QUESTIONAIRE

As part of the WAIS research project, your feedback is extremely important. Please take a few minutes to complete this after you have become comfortable with WAIStation.

1. How could WAIStation be better?

2. What was confusing about WAIStation?

3. What could be removed from WAIStation?

4. What could be added? What could WAIStation do for you?

5. Did you make any discoveries about WAIStation?

6. How much time did you use WAIStation?

7. Did WAIStation feel like a "real" Macintosh program?

8. If you have used other information retrieval programs, please comment on how WAIStation compared. Please list the systems you are comparing with.

9. Was the User Guide helpful? Do you have suggestions?

10. Other comments:

Place
Stamp
Here

Thank you! Please fold and mail this, or give it to your system administrator.

Place
Stamp
Here

Brewster Kahle
Thinking Machines Corporation
245 First Street
Cambridge, MA 02142-1264

- fold here - - - - - - - - - - - - -
- -